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Referrals of Participants in an Urban WIC Program to Health and Welfare Services

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Synopsis

The Special Supplemental Food Program for Women, Infants, and Children (WIC) provides

supplemental food, nutrition education, and referrals to available health and welfare services. Recipients are income-eligible pregnant and postpartum women, their infants, and their children who are younger than 5 years of age. Although studies have documented the nutritional benefits of the program, the extent to which WIC nutritionists help eligible women to obtain available health and welfare services, and the degree to which this referral activity promotes health, is largely unknown.

The researchers examined the referral activity at one urban WIC clinic, but did not evaluate the outcomes. Of 1,850 persons seen, there were 762 referrals by WIC nutritionists for 597 persons at the Lawrence, MA, clinic during a 2-month period. Of the 597 persons, 494 (83 percent) were WIC participants and 103 (17 percent) were nonparticipants. The rate of referrals for WIC participants was 27 percent. Multiple referrals were common, with 127 people receiving more than one referral. WIC nutritionists at this site offered a variety of referrals to their clients. The majority of referrals (61.7 percent) were for supplemental food. Nonnutrition-related referrals were to medical and

dental services (20.5 percent), developmental and educational services (12.5 percent), and social services (5.4 percent). Nonnutrition-related referrals for women included referrals for family planning, substance abuse, job training, teenaged parenting, and high school equivalency programs. Infants and children were referred for dental care, growth failure, the Head Start Program, kindergarten enrollment, early intervention, and protective services.

WIC nutritionists are in an ideal position to evaluate a broad spectrum of health issues and to refer participants to health and welfare services because clients return regularly for vouchers and nutrition counselling. The authors conclude that WIC nutritionists should be given formal training in the evaluation of, and referral for, nonnutrition-related issues in order to maximize their health advocacy role.

THE SPECIAL SUPPLEMENTAL FOOD PROGRAM for Women, Infants, and Children (WIC), established in 1972, is the country's largest public health nutrition program. WIC provides supplemental food supplies, nutrition education, and assistance in obtaining health and welfare services (1).

Participants are income-eligible pregnant and postpartum women, their infants, and their children younger than 5 years of age. In fiscal 1990, WIC served an estimated 4.5 million participants per month, and Federal program costs totaled \$2.2 billion that year.

The U.S. Department of Agriculture, through its Food and Nutrition Service, administers the program and provides grants to 54 WIC agencies in 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands. In determining the eligibility of their participants, most WIC agencies use an income limit of 185 percent of the Federal poverty level of \$13,400 for a family of four, or \$24,790. WIC agencies assign priority among participants according to their criteria for nutrition and health risks. Pregnant and postpartum breast feeding women and their infants are given the highest priority. Older children with nutrition risk factors, such as iron deficiency or poor weight gain, are given high priority.

Investigations have demonstrated associations between participation in WIC and positive health outcomes, such as reduced frequency of low birth weight deliveries (2-9), reduced Medicaid costs for newborns (6), reduced rates of anemia in children (10, 11), and increased nutrient intake by children (12). The beneficial effects of WIC participation often are attributed to the direct nutrition-related benefits of the program (13), largely overlooking the effects of the health and welfare services coordination function. Two studies were found concerning the impact of WIC participation on the use of health care. One demonstrated that WIC participants more frequently used a children's clinic

than did nonparticipants (14). The other suggested that children enrolled in WIC are more likely to have a regular source of health care (13).

Although these studies have documented the nutritional benefits of the program, it is largely unknown to what extent WIC nutritionists help eligible women to obtain health and welfare services, and how effective the health and welfare services referral and coordination function is in promoting health.

Methods

We examined patterns of nutrition-related and nonnutrition-related referrals made by WIC nutritionists in a large, urban WIC program in February and March 1990. We examined the numbers of people referred, the numbers of referrals (sometimes more than one referral was made for one person), the types of referrals, and the reasons for referral during that 2-month period. No attempt was made to examine outcomes of the referrals.

The study was conducted at the WIC Program at Lawrence, MA, an industrial city 30 miles north of Boston, which had a population of 63,175 in the 1980 census. Nineteen percent of the general population and 31 percent of the children are in families with family incomes below the Federal poverty level (15). The unaffiliated WIC clinic serves a population that is 80 percent Latino, mostly immigrants from Puerto Rico and the Dominican Republic. Most of the remaining population is white. The Lawrence WIC Program employs 5 nutritionists and an average of 68 new infants are enrolled each month.

Data on referrals was provided by the clinic's WIC nutritionists, who filled out a study data form whenever a referral was made during the study period. A referral was designated any time the nutritionist gave a person information about services available outside the WIC clinic in response

to a perceived need or in carrying out a preventative strategy. Minimally, enough information had to be given so that the person could call the referral agency. In other cases, the nutritionist called the agency and referred the person directly.

The data form included demographic information, such as the client's participation status, the prenatal and postpartum status of the woman, and the age of the child. Those given nutrition counseling and those for whom food vouchers were prepared were defined as WIC participants. Non-participants were those not receiving vouchers, and were usually family members of participants. Information was collected in the following four categories of referral: nutrition, medical and dental, educational and developmental, and social service. Within each category of referral, the specific type of referral was recorded. For example, educational and developmental referrals for children may have been to the Head Start Program or to early intervention programs. All data forms were screened for completeness; 14 forms were excluded owing to incomplete information. No attempt was made to link forms with clients' names or records, allowing sensitive information to be collected without obtaining informed consent.

The total numbers of visits to the WIC clinic for participating women, infants, and children during the 2 months of the study were obtained through appointment records. Referral rates were calculated for participating women, infants, and children by dividing the the number of participants receiving referrals by the total number of visits.

Results

A total of 1,850 WIC participants were seen by the nutritionists during the 2 months of the study. Twenty-seven percent of all participants were referred to services outside the WIC clinic. The rates of referral are shown in table 1. Although women had fewer total visits than infants and children during the study period, 38 percent of the women were referred to outside programs or agencies. Of the 1,455 infants and children seen, 27 percent of the children and 17 percent of the infants were referred.

The referral rates are the average of the two monthly rates. We found that 41.9 percent of the participants were referred to outside services during the first month of the study and 23.9 percent during the second month.

Of the 597 persons referred overall, 494 (83 percent) were WIC participants, while 103 (17 per-

Table 1. Rate of WIC referrals of participants to health and welfare services by nutritionists at an urban clinic

Category	Number of visits	Number referred	Rate of referral (percent)
Women.....	395	150	38.2
Infants	484	83	17.2
Children.....	971	261	26.9
Total.....	1,850	494	26.7

Table 2. Breakdown of clients and referrals to health and welfare services by an urban WIC program in a 2-month period

Category	Persons	Referrals
Referred.....	597	757
WIC participants	494	645
Women.....	150	192
Prenatal.....	81	93
Postpartum.....	69	99
Children.....	344	453
Infants.....	83	97
Older.....	261	356
WIC nonparticipants.....	103	112
Women.....	92	95
Children.....	11	17

cent) were people not obtaining vouchers and classified as nonparticipants (table 2). The majority of nonparticipants referred were women; of the 242 women referred, 92 (38 percent) were nonparticipants.

Table 2 indicates a total of 757 referrals made for 597 people. Multiple referrals were common, with 127 (21 percent) people receiving more than one referral. Ninety-seven persons (16 percent) were referred to two services, 22 (3.7 percent) to three services, and 8 (1.3 percent) to four separate services.

Of the 757 referrals, 192 were for participating women, 453 for participating children, and 112 for nonparticipants (table 2). The majority of the 757 referrals were for supplemental food. However, nearly 40 percent of all referrals were nonnutrition-related; these referrals included those for medical and dental services (20.5 percent), educational and developmental services (12.5 percent), and social services (5.4 percent).

The categories of reasons for referrals of participating women can be seen in table 3. Of the 192 referrals, nutrition-related referrals were most common; however, 55 (28 percent) of the women's referrals were to nonnutrition-related services. The largest number of nonnutrition-related referrals

Table 3. Numbers of WIC referrals to health and welfare services for 192 women participants at an urban clinic

Type	Number
Nutrition related.....	137
Supplemental food.....	135
Emergency food.....	2
Medical and dental.....	22
Prenatal care.....	5
Primary care (postpartum).....	2
Specialty care.....	1
Family planning.....	14
Education and development.....	27
Job training.....	4
Teenaged parenting.....	19
High school equivalency.....	4
Social services.....	6
Program based.....	6
Protective services.....	0

Table 4. Numbers of WIC referrals to health and welfare services for 453 infant and child participants at an urban clinic

Type	Number
Nutrition related.....	244
Supplemental food.....	240
Emergency food.....	4
Medical and dental.....	126
Primary care.....	17
Emergency care.....	2
Specialty care.....	2
Failure to thrive.....	2
Dental.....	43
Hematocrit and lead test.....	60
Education and development.....	65
Head Start Program.....	40
Kindergarten enrollment.....	12
Day care.....	6
Early intervention.....	2
Individual education plan.....	2
Developmental evaluation.....	3
Social services.....	18
Program based.....	15
Protective services.....	3

Table 5. Reasons given in 757 referrals of 597 clients to health and welfare services by an urban WIC program in a 2-month period

Reasons	Number	Percent
Nutrition.....	472	72.6
Medical needs.....	102	15.7
Behavioral and developmental.....	51	7.8
Income supplementation.....	14	2.2
Legal.....	5	0.8
Abuse or neglect.....	5	0.8
Family violence.....	1	0.1
Total.....	650	100.0

were to programs for teenaged parenting and family planning services. Other services referred to were prenatal care, job training, high school equivalency programs, and program-based social services.

Of the 453 referrals for participating infants and children, 46 percent were to nonnutrition-related services (table 4). Hematocrit and blood lead testing were the most common medical referrals for infants and children, followed by referrals for dental care and primary medical care. A few children were referred for other medical services, such as emergency medical care or specialty medical care. Educational and developmental referrals included 40 referrals to the Head Start Program and another 12 for kindergarten enrollment. Of 18 referrals to social services, 15 were for program-based social services, and 3 were to protective service agencies.

Women are frequently dropped from WIC Programs after the birth of their children, but in Lawrence exceptions were common for teenagers and lactating mothers. Of the 103 nonparticipants referred for outside services, 92 were women (table 2). Of the 112 referrals for nonparticipants, 86 (76.7 percent) were for supplemental or emergency food assistance. Although the 26 nonnutrition-related referrals for nonparticipants was a small number, the nature of the referrals was significant. Six referrals were made for primary medical care, 2 for emergency or specialty medical care, 1 for substance abuse treatment, 1 for job training, 1 to a teenaged parenting program, 14 for program-based social services, and 1 to protective services for issues of neglect of the children.

The categories of reasons for nutritionists' referrals are shown in table 5. There is no one-to-one correspondence between the number of people referred (597), the number of referrals (757), and the reasons given for referral (650). In the case of multiple referrals, nutritionists sometimes listed more than one reason for referral. In other instances, because multiple referrals sometimes were made for the same underlying reason, only one reason for referral was listed. For example, one child was referred both for developmental evaluation and for the Head Start Program; a single reason for referral, developmental problems, was listed. Overall, WIC nutritionists listed nutrition as the primary reason for 72.6 percent of the referrals. Other reasons for referral included medical issues (15.7 percent), behavioral and developmental problems (7.8 percent), income supplementation (2.2 percent), legal issues (0.8 percent), child ne-

glect (0.8 percent), and family violence (one family).

Discussion

This study may be the first to document referrals by nutritionists at a WIC clinic. It shows that they made a large number of referrals, and 38 percent are unrelated to specific nutrition problems. We did not document the outcomes of the referrals. The appropriateness of the referrals and the resulting benefits to the health and well being of the persons referred merits further examination. However, this study is a first step in identifying the broad scope of referrals being made by the nutritionists in an urban WIC program.

The study has some limitations. There is uncertainty about the true rate of referral, since we found that the overall referral rate dropped from 41.9 percent in the first month to 23.9 percent in the second month of the study. It is not clear whether the higher referral rate during the first month was related to greater initial enthusiasm for the study or to a real difference in the need for referrals in the second month. By report, the WIC nutritionists believed that they were less likely to document referrals during the second month of the study because of the added paperwork demands on their already full schedules, but we are unable to validate this perception.

Another consideration regarding this study is that the data come from a single WIC site, so that the findings cannot be generalized to other WIC sites. Referral activity at any site probably depends both on the availability of local services and the general attitude of the nutrition staff and their supervisors toward referral. In addition, at some sites, an overwhelming caseload may preclude addressing nonnutrition-related issues. Not surprisingly, most referrals were for supplemental food. It has been shown that in Boston maximum participation in food stamp, school meal, and WIC programs covers only one-third to two-thirds of household food costs for low-income families. Moreover, the high housing costs in the area render the cash benefit provided by the Aid to Families with Dependent Children Program insufficient to purchase an adequate amount of food (16). Thus, referrals for supplemental food may be an important component of the beneficial effects of WIC on nutrition status.

We suggest that referral services provided by WIC nutritionists may be having a significant impact on the health of low-income women and

'In addition to lack of resources in many communities, the currently available funds devoted to WIC are probably inadequate to support an expanded role for the WIC nutritionist, who has to have the time to make referrals and to followup.'

children. The benefits may be related to better integration and use of health care and social welfare systems resulting from referrals by WIC nutritionists. Future studies of the beneficial health outcomes of WIC participation, especially multifactorial outcomes, such as low birth weight deliveries, should consider the impact of both nutrition and nonnutrition-related referrals generated at WIC sites.

An important implication of the study findings concerns the training of WIC nutritionists. In order to maximize their ability to provide access to and coordinate the participant's use of available services, WIC nutritionists need to be able to recognize nonnutrition-related issues that require referral. In referrals for women at this clinic, these issues involved parenting, drug abuse, depression, education, job training, and family violence. Issues for which children were referred included behavior, development, education, child abuse, and neglect. Without adequate training, the nutritionists may be unaware of existing health and welfare service resources in the community or may fail to recognize the need for referral. Inadequate training may result in unnecessary referrals to specialty clinics or programs.

Many of the referrals made by the nutritionists in this study were those traditionally thought to be in the domain of primary medical care, indicating that the primary care system in Lawrence may be insufficient to meet the complex medical, social, developmental, and educational needs of low-income families.

In some respects, WIC nutritionists are in a better position to address some primary care issues than are their medical counterparts. Clients return monthly or bimonthly to pick up vouchers and twice yearly for nutrition counselling. In contrast, well child care occurs only on a yearly basis for older children. Given the regular returns to the clinic, it is not surprising that nutritionists occasionally made referrals for such issues as drug treatment, child abuse, and neglect. Because of

their high level of case continuity, WIC nutritionists are in an ideal position to recognize and refer persons for these important issues. However, many WIC nutritionists have no formal training in primary care issues other than nutrition.

An exemplary referral training program might consist of small group discussions for nutritionists with community medical care providers, mental health professionals, and social workers. The goals of such a program would include an introduction to State and community resources; education about common medical and developmental issues encountered in low-income settings; experience with interviewing related to sensitive subjects, such as screening for drug abuse and family violence; and techniques for setting up a successful referral and followup program. The scope of this educational program would be determined by the availability of resources at the community level.

Adequate and appropriate referrals for WIC clients go beyond the issue of proper training for nutritionists. In order for referral to happen, there has to be an appropriate facility; that facility has to be accessible to people of low income. If there is no local substance abuse treatment facility, there can be no referral for drug addicted women. Further, it would be unsound and unkind to screen for sensitive issues for which no readily accessible treatment were available. In addition to lack of resources in many communities, the currently available funds devoted to WIC are probably inadequate to support an expanded role for the WIC nutritionist, who has to have the time to make referrals and to followup.

Our study has demonstrated efforts by WIC nutritionists to integrate clients into the existing health care system and to provide nutrition resources beyond the program's nutrition and education guidelines. We found that nearly 27 percent of program participants seen at the clinic were referred to outside services, and that 38 percent of these referrals were for nonnutrition-related services involving medical, educational and developmental, and social issues.

This activity may have a beneficial effect on a wide variety of health outcomes. WIC nutritionists should be trained to recognize nonnutrition-related problems and to make referrals to appropriate services. Further study of the referral services of other WIC clinics is called for, together with studies of the effect of this activity on health outcomes.

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